

date: October 21, 2009

to: Forest City Military Communities, DOE HQ

from: Vipin Gupta

subject: The Use of Triangular-Shaped PV arrays to Better Blend into Historical Structures

Background

When considering the installation of a solar PV array on a designated historical structure, placement of each solar panel requires extra attention to aesthetic considerations. If the solar array cannot be installed behind the structure or “hidden” on a roof plane that is not visible from the public street or sidewalk, it can sometimes be installed as an architectural feature that blends into the historical structure. One way to do this is to utilize triangular-shaped PV panels that conform with the building’s roof lines.

A Triangular-Shaped PV Array on a Historic Home in Madison, WI



In the historic district on the isthmus of Madison, Wisconsin, there is a designated historic home with an unusual PV array. The owners of this home applied to the city’s Landmarks Commission for a permit to install a solar PV array on their rooftop. With the south and west oriented roof planes facing the street, they proposed to install Sharp triangular-shaped PV modules to align with the roof hip. With no location behind the house to install a solar PV array and no suitable roof plane hidden from public view, the Landmarks Commission accepted this proposal and permitted the construction of this novel PV array (see photo above).

Conclusions

As with art, opinions vary widely on whether solar PV panels should be installed on the visible exterior of historical structures. Whether desirable or not, there are at least a multitude of technical options available worthy of consideration by owners, historical societies, and regulatory bodies.